

ANTIQUITIES OF NICARAGUA—ORIGIN OF THE PALENQUE BUILDERS.

A Letter from Dr. Earl Flint to Dr. Engelmann.

The discussion which is given in the following paper was called forth by an article which appeared in the *Popular Science Monthly* for November, 1880, by Dr. De Costa, referring to the origin of the Palenque builders, and denying the evidences of Pliocene Man. All that refers to South America I have copied from the writings of José Carlos Manó.

A long time must elapse before the riddle of man's first advent can be solved. The history of a thousand centuries requires a congress of collators to collect it from the debris of cataclysms occurring during so long an era. Inensible transformations, that geologists allow long ages for their realization, often hide relics of the past occupants of a continent, that are again revealed by the gradual disintegration of some little rivulet, whose ripples wear away, after countless ages, the rock underneath which they are hidden.

We can well remember when the struggle commenced between the old conservative scientists and the modern pre-Adamites, and even now there are many who do not like to leave the old dogma of a European or Asiatic origin for the

first occupants of the two Americas. I cannot deny that Asia has the highest land, and when its depths are explored, they may reveal as many extinct races of animals, as our own territories, but *until then* am not bound to give it the precedence. Abrasions noted by Prof. Powell in Colorado Territory seem to have worn to a depth of 24,000 feet; and being 6,000 feet higher at their base than the present sea level; if these had remained undisturbed, they would have shown a height equal to the highest Himalayas. With us the rise has been gradual, showing a *very long time* to have elapsed in the accomplishment. The Columbia, Missouri and Colorado rivers can be said to originate in the outlets of an ancient lake, where the fossil remains of extinct animals abound—unknown in Asia or Europe. They may yet be found there, when the westward progress crosses the Pacific, and sends geologists to explore its hidden recesses.

Plants and animals have their special climate—man adapts himself to all. From remote times he has been moving about. He overruns a country and disappears; he invades another and exterminates its occupants, and like them is in turn exterminated by later adventurers. All of this mixture of races; and the remnants of their work, are left for his successors to study and ponder over, and from them trace, as near as possible, the rise and progress of each, taking the most prominent as guides to solve the progress of their "rise and fall," and the course of their migrations.

Now, if as a result of these investigations, you can find similar work of one of the dominant races from one end of a continent to another, and this work increasing in excellence as you proceed, no doubt will remain of its source or origin.

Facts of this nature are being accumulated relative to the origin of the ancient races of this country which may upset the hasty conclusions of De Costa, who wishes to give the days and date of their European advent. He says: "The races that rose to wealth and power in Central America did not succeed any rude spear maker." According to this view, the civilization of the original European was born with him; he had no struggle through long ages to reach the top; his hammer and chisel were found ready made, and he had only to grasp them and make his model Venus. He says the Spaniards conquered a people "who had themselves figured in the role of invaders." He does not believe these were descendants of any indigenous race. He speaks of a submerged continent to the west, as a mode employed by some for explanation. Here I agree with him, partly. Why should the so-called Pliocene man of this continent, under similar conditions of climate,

not go on progressing in the scale of civilization, as well as his European neighbor? There is evidence on the west coast of Nicaragua and Costa Rica of a submergence of land, under the Pacific, whether a continent or not, I am not able to decide, but on the strip left at Nicoya jade has been found in abundance. That it comes from the *west* has not been disputed: it is rarely found in the mountains or among the hill tribes. If in former epochs an "equatorial belt" extended across the Pacific, it would explain this and many other enigmas not yet solved. Thus far it seems that the hill tribes did not mingle with those of the plain and coast.

All of the old and new investigators who swarm around Palenque and its neighboring ruins, if they confine themselves to that limited field, will never arrive at the true solution of the origin of its builders. They must traverse the Cordilleras from Mexico to Bolivia, where they will find inscribed on the eternal rocks the rise and progress of a race whose labors culminated in the neighborhood of Palenque and Esquintlar. The workmanship seen on the tablets of the latter are more complicated and better executed than those on the monoliths of New York and London, and had an equal amount of money been expended on American research, more astonishing results would have been reached.

Let us now see what Mano says. "Starting at Samiapata, latitude 17° south, at an altitude of 12,000 feet, near the apex of the mountain, inscribed on the rock in relief, is a disc, on which is also sculptured in relief the figure of a jaguar, cougar or oncelot; a little higher up is a similar disc of the same dimensions, a grotesque imitation of the first, and more coarsely and barbarously executed, proceeding from it is a double series of lozenge-shaped feet, delicately and admirably executed; incompatible with the gross inscription of the former, all terminate at a species of throne supported on the four feet of a bird of prey, surrounded by a circular line of seats, all conjoined and formed from the body of the rock, perfectly pencilled, on a species of sandstone, that from exposure has acquired the hardness of granite."

Surrounding this species of platform that forms the top of the mountain, are eight half-spherical holes, about a yard in diameter, communicating one with another by small canals. Similar ones occur in *all* archæological stations to the northward. At the foot of the mountain in front of a level plateau, on the rocky face are excavations, or niches, mostly covered by alluvium. Underneath it, and among the stones forming the habitations, are inscribed tablets representing the *same* personages similarly made as those on the lateral rock, around

niches at Chiriguanes, territorio del Chaco, less elevated, and separating the latter from the former, *all identical* with those on the murals of Palenque.

Here the Indian Hercules, grasping his macana; the kings, with sceptres pointed like the bill of a bird (which M. Brasseur mistook for a Brahman); the head of the Danto (elephant, according to Stephens); the divinities, belted with decapitated heads, ornamented after the style used by the ancient Egyptians (see note ¹); galas of condor heads, extravagant hieroglyphics—all are found there, but all rudely made, and coarsely executed. The likeness of these barbarous scratches on the rocks, compared with the beautiful stuccoed monuments of Palenque, is what one would observe between the poorest military lithographs of Epinal and an engraving of Charlet, or a painting of Horace Vernet.

At Sicca-Sicca, with an altitude of 4,300 metres, in a tunnel-shaped depression, common in the higher Andes, inscribed on the rock, a repetition of the greater part of the images seen at Samiapata occurs, mixed with others in relief, but better made, showing real progress in the art of this primitive people.

Here are also sepulchres, in no way resembling los shulpas ó huacas Inca-secas, that are generally made on the surface, oven-shaped, without mortar or cement of any kind.

Each of these tombs required immense labor for its construction. The admiration of the observer is inexpressible, when, on looking at them, he remembers that the people who completed this immense labor were entirely ignorant of the use of iron.

All of these sepulchres are in form of a square, and face the East. Cut to a slight depth in the rock are various tunnel-shaped excavations on the face of the rock, with a longitude varying from 0.75 cs. to 1m. 25 cs., terminating in a vault where always occurs a limited number of human skeletons, whose skulls indicate two races radically distinct, one a superior race, with a better conformation than one might expect in a legotrix race, the other an inferior race, with an enormous development of the lower jaw, showing one of the lowest grade of human beings. In some of these tombs are found inscribed on detached pieces of trachyte and porphyry figures of the llama, condor, winged snakes, Dantos with a

NOTE 1.—The belted Deities spoken of at Samiapata, have been brought to perfection in the beautiful tablets at Esquintia, admirably figured by Habel in the Smithsonian Contributions to Knowledge, No. 269, where we have a profusion of them with their supplicants, whose gestures are admirably expressed, where the notably distinct hieroglyphic signs of the *supplicants*, from those of the Deities, undoubtedly represent occurrences of a nation long since passed away, leaving these sculptures as a record for us to decipher, a task more difficult than those on the Egyptian monoliths, gazed at for seventeen centuries ere their meaning was explained.

development of trunk not unlike the *Paloxeterium magnus* restored in the Paris museum. There is not found in any of these tombs a single emblem of sun or star, nor any object in gold, nor gems, or any of the precious metals.

The ruins of Tiaguanaco, so often described, are nothing but a faithful reproduction (here sculptured on blocks of stone of enormous dimensions) of the large animals inscribed on the solid rock at Samiapata au Chiriguanes, less the figure of the Caiman, first seen here. In one of the excavations made by M. Berth, I saw an ancient tomb, that is to say, pre-Incan; without surprise and with great satisfaction I again saw the presence of the two races, whose peregrinations should be studied in this part of South America—whose traces are found from the portion of the Chaco Argentina to Cali. The quarter part of the skulls at first sight, presented a superior organization, a sensible resemblance to the ancient Mexican. The horrible skulls of the inferior race, that were enslaved by the other, I again encountered—the narrow, convex forehead, and the beastly development of the lower jaw, that would give a facial angle a little above the simian. In vain M. Berth and myself tried to preserve them, but on exposure they crumbled in pieces. M. Berth took away an inscribed stone, similar to those at Samiapata, representing a King, dressed in a species of Dalmatia, with a sceptre in each hand, tipped with heads of the condor, under whose feet are various supplicants. It requires much attention to recognize this, in a work so barbarously made. In one of the beautiful stuccos of Palenque, reproduced in the work of Brasseur de Bourborg, is a scene absolutely equal, as regards the personages, but incomparably much superior.

All around the borders of Lake Titicaca, are found remnants of a remote civilization. These are distinguished with great facility from the Incas, as they are generally covered; and wherever encountered in other places, aside from the rock, are surrounded on all sides with stones and of slight depth. Exceptions to this are seen at Cah Columbia, where the depth is from 8 to 11 varas, but there no stones are used. In Nicoya Costa-Rica the writer has seen a similar mode of burial, also at Teustepe, and on the coast of Nicaragua, where sides, bottom and top are covered with rock. Pottery and metals and ornaments also occur, and now and then large urns with the entire skeleton in a sitting posture—probably some chief.

Inscriptions on the rock at Vilcocayo (Peru), also occur, the same as those described, but no sepulchres; but in a region lower down at Hachumayo I encountered tombs in natural

excavations of the rock with bones of both races similarly placed as those at Telimbela, in Ecuador; also near Diezmo (Peru), the same artificial caves and bones of both races. Near Telimbela, on a small calcareous sierra, filled with natural caves, the immense exodus had converted them into sarcophagi, with an extraordinary pains to conceal them, and had it not been for having rains during the three previous years, they would not have been seen. Not far from this place is an enormous block of dark sienite, artificially flattened on top, sculptured on its lateral faces which show the salient angles (see note 2) left at its fall from the mountain, where it constitutes the primitive formation of Chimborazo, according to Humboldt. This stone is but a repetition of the altars in the major part of the stations of the exodus, followed up from the borders of Bolivia and the Argentine Chaco, but the general form of this resembles greatly the so-called sacrificial stone, figured by M. Nebel in his *Antiquities of Mexico*.

Unlike those found at the other stations, the 8 holes on its top have no communication, one with the other,—although the number is exactly the same, their disposition is different. Here 7 in a circle surround a central one of much greater capacity. Among the coarse ornamentation surrounding them are seen the same coarse and monstrous imitations of human heads, winged serpents,* birds and animals of indefinable forms. The lateral inscriptions in relief resemble those on the Mexican stone. A warrior whose head is adorned with that of a condor, holds in one hand a species of javelin, and in the other an octave shield (noticed here for the first time), and whose nasal appendage (see note 2) supporting a large ring, is of enormous dimensions, stands on the prostrate form of another warrior, the same as at Samiapata, Chiriquans, Sica-Sica and Tignanaco, in the attitude of a suppliant.

At Ibambuna, altitude of Huaca, is another Necropolis, with sculptures on the surface, and in relief, that continue along the hills, near the top of the heights of Boliche, near Tulcan; another occurs near the frontier of Columbia. From here I could not find any signs of the ant-like emigration until reaching the Cordilleras near Cali.

At my first study here I was submerged in a sea of perplexity, owing to the excavations. Although square, they were not made facing the east, and the terminal caves were much larger after leading through the usual narrow passage, and though not arched with slabs (scarce in this neighbor-

NOTE 2.—The nasal prominence in the rock inscriptions found here, is not often seen in profile. In three drawings, Nos. 108, 124 and 150, from Dead-Man's Island, separated by a channel (that bends into the main island) from Zapatero, it is seen, but without the ring, in all its deformity.

hood) but not alone this fault of the slabs—various other circumstances upset all my ideas about the remote antiquity of these sepultures. In some that had been violated, and in some I saw opened, I encountered gold toads⁸ (a religious emblem of Zipas), suns in alloy of copper and gold, needles of copper, and also of pure gold, adornments made of a hard nut, which I have seen in use on the Auracanian plains of the Chaco and Paraguay. Owing to the humidity of the soil, few bones were found in many of the sepulchres, yet a considerable number of skulls preserved in some of them showed a uniform type. Although pyramidal in form, they were still highly superior to those until now found in association in all the former sarcophagi visited, and, as stated above, I was in a sea of doubts and perplexities, but soon had the luck to solve the enigma. In all that region, and the tierras of the Chulpas of Peru, live a class of men called Huaceros, whose profession is to violate these deep sepulchres in search of the gold ornaments found therein. One of these informed me that higher up on the Cordilleras similar ones occurred, but poor and completely disregarded, as they yielded no gold, only images in burnt clay and engraved stones. With no great admiration of this new species of miner, I was thankful for the place he had indicated, as the location of the poor ones was precisely the object sought. At sight of two or three, placed mathematically to the east, opened probably by mistake of some huacero, I was at the point of shouting Eureka, like the ancient discoverer. In these sepulchres I encountered the bones of the two races, with the beastly prolongation of the lower jaw and the distorted tibia of the inferior race, and the well-formed skull of the superior race; also images in clay with the type of nose prominent and similar to all of those found in the sculptured figures of this race, in all the territory traveled, the same that took the attention of M. Brasseur de Bourborg and all ethnologists; still seen in its purity among the Jibarros on the frontier of Bolivia and Brazil, and occasionally among the Burgos of the Argentine Chaco. What had perplexed me was that the pre-Columbian Indians, Jamundis and Pijas, had followed the trait of all the South American Indians to imitate all they see, and copied in the sepultures the ancient structures of their predecessors. Nearly all the Cordilleras half way up are covered with this coarse sculpture, in long stretches, at each station, from the Argentine Chaco to Cali.

Travelers, among them Baron Humboldt, and over all, the erudite Columbian Acosta, speak of similar sepulchres in the central Cordilleras (here in Nicaragua, near the summit), and

I formed my belief, that at one or two degrees south of Cali, the exodus where it leaves the edge of the Pacific, to return to the loved highlands, is divided into two currents, one in a direction to the north of Colombia, or perchance to Venezuela, by Antioquia, engendering the civilization whose remnants were encountered by the Spaniards on entering the territory of New Granada from the sea; the other by el Chaco and Panama Isthmus, founding in Central America and Mexico the civilization culminating in the construction of Palenque, Uxmal, Copan, etc., whose trace and history are blotted from human memory, that may have begun its new birth, with more strength in Mexico and Peru at the time of the conquest.

The grotesque imitations of human heads is very common, and is always seen where a profusion of inscriptions occur in the caves and on the face of the rocks and cliffs. The winged serpent was seen inscribed on a detached block of granite, broken in two and partly buried on the banks of a stream, at San Rafael. The cuttings were deeply furrowed and coarsely made. It has an animal in its mouth, grasped by its head (fig. 42). On Dead-man's Island, animals with trunks also occur, and grotesque forms not easy to define. One of the group has a very long neck (figs. 116, 118, 120). Also on this island are found what I have thought were representations of the octopus, one with seven, the other with nine tentacles. Here the evolutionist may explain the odd number of the tentacles (figs. 136, 147). No. 126 seems to be a grotesque representation of the bird in the act of swallowing a human head, improved in Habel's delineation, where a bearded warrior is suspended from its mouth—head and arms pendent—in his gala dress and head adornments, so noticeable in all the Esquintla tablets. On the same island I saw for the first time lines of stars used in delineations. Near by, on the mountain of Membacho, on a large detached volcanic rock, is another instance, and undoubtedly made by the same people. Here I saw pottery, with various rayed stars, made by indentations on the inner bottom, but it is of a later period. Figures referred to are at the Peabody Museum private numbers. The island was in times past connected with Zapatero. The soil on both was quite deep in places, and on the latter in the woody part are many idols. (Figured by Squiers.) The small island, after being deprived of its wood, has been in places denuded by rain, revealing the inscriptions. Some are nearly obliterated, others, partly covered, were revealed by removing the remaining soil. In places are found the shoe-shaped jars, so abundant on the main island as to give to it its name. On the latter, I found an image of copper and gold, and a bead, also

alloyed, both at the National Museum. Rock inscriptions, *partaking* of the character of those mentioned by Manó, are seen on the summit of the Cordilleras, and on the mountains about Teutstepe. Many are being obliterated, and only a general idea of what they were can be formed. Among those on the Cordilleras the cross or star spoken of by Manó has been found in various places well preserved (see figs. 60-66 at Peabody). With a single exception I have found no sepulchres here hewn in the rock. Whether they will occur in other explorations remains to be seen, or whether this neighborhood was only occupied by a branch of the main stock, or the disappearance of them at the upheaval or some cataclysm, we must wait and see.

One *natural* cave in the neighborhood of Teustepé is worthy of note, as it contains a numerous collection of human bones, assorted, and from a few sent to the museum, I think there are two kinds. Skulls placed by themselves were found in the outer cave, or mouth. The inner cave was so ingeniously concealed that I did not see it—filled up with a cartload of ribs—and so narrow as to preclude an idea that it was a passage. Afterwards the guide (thinking that I was in search of treasures) visited it and crawled in, found more skulls, and *each* one was enclosed in a calabash, and a mummified entire skeleton was found, on the bed of the cave. He brought me the skull, and one tibia and humerus of the mummy, also a wooden seat, used at the time of the conquest for a seat and pillow. On the last skulls pieces of brown hair were found. From these circumstances, I think the cave was re-occupied. What called my attention to the antiquity of the skulls found at the mouth was a piece of wrought fossil shell ornament. The outer cave was protected from moisture. The rock is quartz, and no moisture can penetrate the cave.

The golden toad mentioned by Manó was common in this neighborhood in the mounds opened, and as I had previously advanced the opinion of a southern immigration to this region in explanation of *one* of the different occupations of Nicaragua, this ornament so common in Colombia would go to prove it.

As to the existence of man on the Pacific slope, during the Pliocene epoch, affirmed by Professor Marsh, and the proofs adduced by him, considered as a "little shadowy" by De Costa, I now present a few facts.

Let us look at one or two of the caves, about six miles from here, at San Rafael. One called "San Andres" contains *self-evident* proofs of human labor on its elaborately inscribed roof, made *before* the formation of the sedimentary rock of the neighborhood. The nearly flat roof extends across the

head of a small ravine, the front face from twelve to eighteen inches in thickness, wrought with vertical indentations, about three inches in width, nearly worn away, top covered with turf, with only a light slope to the adjoining, nearly level plain. The roof-facing was worn away by the rain dripping over its edge, and as the rock is of flinty hardness, a very long time would elapse for its destruction. The ends and back of the cave were found resting on four layers of sandstone; the central part had been removed to shelter caves by the father of the present owner; we had to remove part of this in order to enter the cave, as the height was only sufficient to allow us to enter on our hands and knees. In removing the three layers from top, near the north side, we found imprinted on the lower layer tracks which appeared to be those of a species of wolf. The lower layer was about five inches in thickness, resting on a compact drift of coarse sand and stones that lay on the bed-rock. The three upper layers were from four to four and one-half inches thick, and at the ends and back supported the roof. The inscriptions extended into and above them, and parts of three were purposely left in that way, so that subsequent visitors could verify the fact. The seams in the layers of sandstone were easily separated; the three upper ones had no impressions of birds or animals like the bottom layer. [Imprint of animal footprints sent to Peabody museum.]

The next step was to find out when this sandstone was formed. In order to solve this, I explored the neighborhood thoroughly. The hills were in many places denuded of the sedimentary rock on their slopes; others had been cut through, and on the fractured face were found fossil leaves, underneath on the banks beds of fossil shell; the latter also occur on the slopes of denuded hills in superficial beds segregated, becoming more compact as you descend, showing at once that the limestone had been formed from them on the ocean bed. This immense bed of limestone covers a great portion of the district, and crops out in the Toba hills west of Rivas, where its *fissured* ledges show that it was thrown up in some convulsion, probably of the upheaval of the coast range.

When the latter event occurred, an inlet of the sea formed the present lake of Nicaragua, and extended north of it to the base of the mountains near Teustepe. Ometepe, Zapatero and Mombacho, the Rivas plain, and a strip of land from Bocano to San Rafael, were undisturbed. Nicoya, in Costa Rica, was also exempt. West of San Rafael, and also near Cafares, rock inscriptions are seen at low tide, showing a submergence under the Pacific, already noticed.

The hills to the northeast of San Rafael formed the northern barrier of this ocean inlet; here, also, the cave-dweller had left roof inscriptions, with an abundance of shell fish near by, no thought of famine disturbed his labors. These shell fish are still seen in immense beds, overtopping the limestone rock; and among them numerous species, some resembling those of the "Dakota group" figured by Prof. Meeks. Here a species of oyster predominates whose average length is from fifteen to eighteen inches, mostly *in situ* with their contents entire, showing a sudden burial under the sediment of the sea rolled over them in enormous masses, as the higher hills to the east sprang into existence, the same now known as the coast range. Their sudden upheaval shut in the water to the eastward, forming the present lake.

This ocean sediment was forced back against the beach, north east of San Rafael, overtopping the cave dwellers and settling in the inequalities around and above them, where it is still seen. The little rivulet running from the hills to the east, has, after a lapse of ages, worn away the rock down to the old ocean bed and uncovered these records in the rocks to show us the handiwork of our predecessors, who toiled in this cave secure from danger, and without fear of want looked out over the ocean watching the monsters of the deep as they disported around them, delineating them on the roof of their habitation; animals whose fossil bones alone remain to us as a testimony of that remote orb.

Returning to the cave of San-Andres, I found to the eastward a high bluff, at whose base now runs a small stream, bending around the land on which the cave is located, passing the terminus of the shallow ravine, not far from the cave. Now, a sudden upheaval to the north and east of the cave, from out the sea, would cause the retiring waters to pass over and flood the cave and disappear in the Pacific, cutting a channel more or less deep, which at the first inundation of rain would serve as its outlet, reinundate the cave, and leave the sandy deposit, forming the first layer over the debris left by the retiring sea wave. The water naturally following the same channel and deepening it, cutting through the soil in four or five years, would reach the rock, depositing a layer of sand each year. At that time the cave would be exempt from inundation, a solution arrived at on my return. The present bed of the stream has cut its way far below through the rock.

I see no other way to account for the formation of the sandstone in the cave. No other sandstone is found in the neighborhood. The present sedimentary rock, plastic at that time and easily disintegrated, would furnish the material depositing

its heavy particles. I have no doubt of its derivation from this source, when in a plastic state immediately after the upheaval.

In support of its plasticity, impressions of a tiger's tracks in line with those of a man, and an animal of the wolf species are seen, and rising the slope about six leagues above San Rafael, the imprint of the man as he jumped a small ravine in pursuit or pursuing the tiger. Human footprints and those of the tiger can be seen at Piñon, on the nearly flat bed of the Rio Grande, near the border of the stream. The tiger seemed to have turned about a number of times, the prints are sharply defined, the rock is extremely hard, of light slate color. The human footprints are less distinctly marked. One each of the footprints were drawn and forwarded to Prof. Putnam, and a small piece of the rock. The fossil shells and sedimentary rock, with a vertebra of large dimensions (height 7, diameter 12 inches) were sent to Prof. Baird, who laments the want of one to do them justice at the museum, owing to the death of Prof. Meeks.

The cave of Riachuello on one side has an elaborate figure of a caiman. Joining its terminal end is a nearly square inscription, broadest at its base, in whose centre, among other inscriptions, is again seen the figure of a large bird. Over the back and tail of the animal are two groups of five holes, and one single one at the terminal of the tail (or inscriptions where it turns up and back), drilled into the rock. The central hole has a depth of twenty-four inches in each, the four others surrounding it ten inches, the isolated one ten; all are evenly drilled. The rock has a hardness equal to quartz. On the ceiling of the cave appears an isolated bird (we will call it a condor), with extended wings, made up of lines turned at acute angles that preclude the *possibility* of their having been cut with a stone ax. (Fig. 36 at Peabody.).

This, with other fair inscriptions, show that they were made by neighbors of those at San Andres; but here others of a later period are seen, greatly inferior, similar to others in *all* of the neighboring rocky ravines; one with two heads, one at the middle, the other above to the left, with a bird perched to the right, scepter like, on a line from the right side and joining it.

If any similarity in these inscriptions to those of South America, can be verified by subsequent comparison, I do not think any improvement will be noted. Those on Dead-man's island and about Teustepe are most barbarously executed. Those referred to in the Riachuello cave and in the rocky ravine below, were made by *re-occupants*. Those made first

were the finer ones. In searching for the sepulchres of their authors, I have sought in the mounds near them, and in other places, for similar figures on the pottery, and for the shell-fish they used as food. The latter is more certain of the two, for although I have found inscribed pottery (west of Rivas), it seemed to have been buried with other ware, although one shallow, bottomless dish, so different from the rest, must have been buried as a *relic*. One mound on the plain not far from San-Andres, at first view, seemed to explain the matter to a certainty; on its upper surface were innumerable chips of quartz, broken celts, arrow heads, &c., showing that it had been selected as a workshop by a *so-called* Palæolithic people, but what was our surprise on excavating, to find shells in a preserved state, and fine pottery of a *so-called* Neolithic people. Now this was turning the scale on all of our former notions about the old settlers. As the mound could not have turned a somersault, we gave it the scriptural interpretation—"The last shall be first"—for there was *no* connection between the chips above and the shells and ware below. I opened with great care five excavations to verify it. Specimens of both are at the Peabody Museum, P. No. 100 and upward. The hard clayey soil of the original mound, probably of considerable height, mistook for a hill by the last occupants and abandoned, has gradually worn away after a lapse of ages, and brought the labors of the two races in close proximity. The shells in this and the neighboring mounds were too much decayed to verify. Some few of the whorled shells in existence could be made out. Let us retrace our steps. I found on the beach in 1875, a few miles below, shells imbedded in the rock and among the broken cliffs, called by me at the time, after the location "Bocana Grōup," in which are included those at San Rafael. Also at Costa-Rica, at Cubibra Bay and Nacascola, accompanied by Dr. Bransford, I found numerous fossil "shell heaps," associated with human remains buried in their centre, and surrounded with stones. At that time I asserted to Prof. Baird, my belief of their connection with the "Bocana Group," still I was not able to deny that the sepulchres in the shell heaps *might have* been placed there by subsequent occupants. But one prominent fact looms up here, and that is man's existence here *previous* to these fossil "kitchen middens." Remnants of his handiwork are now lacking to complete the chain of evidence, and we find it in the old mounds on the Rivas Plain, where, at their very base are found pieces of wrought shells; one piece was a section of one of the whorled shells found at Bocana, and near the Riachuelo cave, while a similar one was found with a hole drilled from end to end, in the burial cave of Teustepe at Cucirozna.

The mounds on the Rivas Plain contain fossil bones of small animals, and under a piece of broken pottery found at their base, was covered with nodules, figure shoe shaped, like that near by at Zapotere, but more primitive; the celts similar to those found by Dr. Abbott, but here the top of the mounds were covered in one instance, with fine ware, broken, in no case entire, used only for habitation. This country has been so often re-occupied and so superficially explored, that many facts to complete partial investigations are wanting, and from the meagre collection at the disposal of Prof. Putnam, he wisely withholds from publication. Of the rock inscriptions he has not a tenth part of what occur in Nicaragua. At first he did not seem to give them predominance over other antiquities; while from the first they appeared to me, in connection with the idols, as the only positive proofs, or in other words, the only reliable ones from which to draw deductions of the antiquity, origin, and migrations of primitive man. They cannot be transported nor exchanged like pottery, although I hold this of great importance to prove his handiwork. It is so intermingled here, that it is hard to discriminate the authorship of associated pieces, widely distinct in make. Have seen but two instances where the line of separation was complete. The first, in the mound of San Rafael was the most remarkable, where the order of succession was reversed; my late friend Dr. Berendt urged me to drop the use of the terms Palæolithic and Neolithic, as of no significance. There it seems he was right, and my letter to him at Esquitla notifying my confirmation of his views was on its way when he was entering the portals of death.

Now I have stated but few of the proofs to be found here, among the debris of past ages, of the succession of races; yet they are prominent ones, and can be verified by any one who will take the trouble to look at them. They may be a "little shadowy," but the shade they cast can be seen, "until another cataclysm overwhelms them."